



Question & Answer Session Public Meeting No. 2, February 1, 2011

Powerline, Vineyard Road, and Rittenhouse Flood Retarding Structures
Rehabilitation or Replacement Project

Question from Audience: 1) Will the proposed development upstream of the dams be located in the impoundment area and therefore be flooded during a storm?

Answer from Project Team: 1) The location of upstream development will take into consideration the known and planned impoundment area limits. Housing and commercial development would not be placed in an area behind the dams where flooding could potentially occur from the 100-year storm.

Q2) How close are the earth fissures to the dams?

A2) One known fissure is located between Powerline FRS and the Central Arizona Project Canal. Because of the proximity of this fissure to the Powerline structure, an "Interim Dam Safety Measure" (IDSM) has been designed and will be constructed soon to mitigate this hazard. [The audience was shown the presentation slide relating to the IDSM. Other fissure hazards zones in the project area were shown.]

Q3) When will the Interim Dam Safety Measure be constructed?

A3) Construction should begin sometime in the spring of 2011.

Q4) What areas are protected by the dams?

A4) The areas protected include downstream development in Mesa, Queen Creek, and unincorporated Maricopa and Pinal counties, along with the CAP Canal, former General Motors Proving Grounds area, Phoenix-Mesa Gateway Airport, and Loop 202 San Tan Freeway. [The audience was shown the presentation slide of the downstream inundation area.]

Q5) The water held back by the dams comes from which area?

A5) The Superstition Mountains and Siphon Draw, along with sheet flow across the desert.

Q6) If water from behind the dams is released into Queen Creek like is shown in one of your alternatives, will that cause flooding downstream along Queen Creek? We already have problems with flooding in that area.

A6) No, the design would release water in a controlled fashion into Queen Creek to avoid downstream flooding and after local stormwater flows through Queen Creek Wash. The District would review any roadway crossings of the wash, particularly at-grade crossings, to examine and potentially improve such crossings.

Q7) What causes earth fissures? Why are they a problem?

A7) Earth fissures are caused primarily when groundwater is pumped out of aquifers. When the water table drops in the aquifers, the land above the aquifer subsides, or drops, creating tension cracks in the soil. Rainwater erodes these tension cracks into deep groves in the land surface. A fissure that develops near and under an earthen dam structure can cause the structure to fail in the event the structure has to contain stormwater.

Q8) Where is the proposed Superstition Vistas development?

A8) In the area directly east and southeast of the Powerline/Vineyard Road/Rittenhouse structures, along U.S. 60 toward Florence. [The audience was shown a presentation slide of the project area.]

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Question & Answer Session (continued)

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Q9) What is a dam and what is a levee?

A9) A flood control dam is generally a structure across a stream (perpendicular to flow) that impounds water and releases the water over a period of time. A levee is a structure parallel to a stream and prevents water from leaving the stream banks. A levee directs flow to a downstream location.

Q10) Who originally built the dams and why?

A10) The dams were designed and constructed by the NRCS with the District as the local sponsor. The dams provide flood control benefits to downstream areas that include land uses such as agricultural, residential, and public infrastructure. Without the dams the area is prone to flooding and sediment damages.

Q11) Who would pay for the rehabilitation of the dams?

A11) The District is working with the NRCS to develop a cost share agreement for the construction of the proposed improvements for the dams. The typical cost share split is 35% for the District and 65% for the NRCS.

Q12) What are development plans in the area? Who is driving this study? Superstition Vistas?

A12) There are a number of plans by local planning agencies/groups such as the City of Apache Junction, Arizona State Lands, and Superstition Vistas. The District, by agreement with the NRCS, operates and maintains the dams. The District is responsible for the upkeep and ensuring the dams meet current dam safety requirements. None of the proposed or future developments are driving the study but they are stakeholders involved in assisting in the formulation of planning alternatives for the dams.